## **ABSTRACT**

One embodiment of the invention is directed to methods and apparatus for determining a variation of a calibration parameter of a pixel of the thermal sensor during operation of the imaging apparatus, after an initial calibration procedure. Another embodiment of the invention is directed to methods and apparatus for calculating a gain calibration parameter using first and second ambient temperature values and respective first and second resistance values for a pixel of a sensor. A further embodiment of the invention is directed to calculating an offset calibration parameter for at least one pixel using a gain of the at least one pixel between first and second times and an ambient temperature at a third time, wherein the pixel is exposed to both scene and ambient radiation at the third time.

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